

**WHAT IS CLAIMED IS:**

1. A method of forming a neutral paint colorant, comprising the steps of:  
blending a first colorant with a paint base to form a paint having a  
chroma substantially equal to zero;

5 adding a first quantity of one of said first colorant or said paint base to  
said paint, to vary the value of said paint;

measuring the chroma of said paint; and

if the chroma of said paint is not substantially equal to zero, adding one  
or more offsetting colorants to said paint to reduce the chroma of said paint so  
that it is substantially equal to zero;

10 wherein said neutral paint colorant comprises a mixture of said first  
colorant and said offsetting colorants, the composition of said neutral colorant  
being determined by the relative amounts of said first colorant and said  
offsetting colorants which are in said paint.

15 2. The method of Claim 1, wherein the mass ratio of said first colorant to  
the total mass of the mixture is equal to the mass of the total amount of said first  
colorant in said paint divided by the total mass of said first colorant and said offsetting  
colorants in said paint, the mass ratio of each of said offsetting colorants to the total  
mass of the mixture being equal to the mass of the total amount of the individual  
offsetting colorant in said paint to the total mass of said first colorant and said offsetting  
colorants in said paint.

20 3. The method of Claim 1, further comprising the steps of:

adding a second quantity of one of said first colorant or said paint base to  
said paint, to vary the value of said paint;

25 measuring the chroma of said paint; and

if the chroma of said paint is not substantially equal to zero, adding one  
or more of said offsetting colorants to said paint to reduce the chroma of said  
paint so that it is substantially equal to zero.

30 4. A paint colorant comprising:

6.3% to 7.7% Color Index Pigment Yellow 42;

2.16% to 2.64% Color Index Pigment Red 101; and

5

3.6% to 4.4% Color Index Pigment Black 7.

5. The colorant of Claim 4, comprising:
  - 7.0% Color Index Pigment Yellow 42;
  - 2.4% Color Index Pigment Red 101; and
  - 4.0% Color Index Pigment Black 7.

10

6. A paint colorant comprising a mixture of pigments blended with a grinding liquid, said colorant being configured to be added to a first paint base to form a first paint, said first paint having the property that when said first paint is added to a second paint a third paint is formed, wherein the chroma of said third paint is less than the chroma of said second paint, the hue and value of said third paint being substantially the same as the hue and value of said second paint.

7. The colorant of Claim 6, wherein said second paint comprises a mixture of colorants with a second paint base, said first and second paint bases being identical.

8. The colorant of Claim 7, wherein the addition of said colorant with said first paint base is controlled so that said first paint has a value which is substantially equal to the value of said second paint.

15

9. The colorant of Claim 6, comprising:
  - 6.3% to 7.7% Color Index Pigment Yellow 42;
  - 2.16% to 2.64% Color Index Pigment Red 101; and
  - 3.6% to 4.4% Color Index Pigment Black 7.

20

10. The colorant of Claim 6, comprising:
  - 7.0% Color Index Pigment Yellow 42;
  - 2.4% Color Index Pigment Red 101; and
  - 4.0% Color Index Pigment Black 7.

25

11. A method of producing a paint, comprising the steps of:
  - blending a mixture of pigments with a grinding liquid to form a neutral paint colorant;

adding said neutral paint colorant to a first paint base to form a first paint; and

30

adding a volume of said first paint to a volume of a second paint to form a third paint;

wherein the chroma of said third paint is less than the chroma of said second paint, the hue and value of said third paint being substantially the same as the hue and value of said second paint.

5        12. The method of Claim 11, wherein said step of adding said neutral paint colorant to said first paint base includes controlling the addition of said neutral paint colorant so that said first paint has a value substantially equal to the value of said second paint.

10      13. The method of Claim 11, wherein said second paint comprises a mixture of paint colorants blended with a second paint base, said second paint base being identical to said first paint base.

15      14. The method of Claim 11, wherein said blending step includes blending Color Index Pigments Yellow 42, Red 101, and Black 7 with said grinding liquid, so that said neutral paint colorant comprises:

15      6.3% to 7.7% Color Index Pigment Yellow 42;  
15      2.16% to 2.64% Color Index Pigment Red 101; and  
15      3.6% to 4.4% Color Index Pigment Black 7.

20      15. The method of Claim 14, wherein said neutral paint colorant comprises:  
20      7.0% Color Index Pigment Yellow 42;  
20      2.4% Color Index Pigment Red 101; and  
20      4.0% Color Index Pigment Black 7.

25      16. A paint colorant comprising a mixture of pigments blended with a grinding liquid, said colorant being configured to be added to a first paint to form a second paint, wherein the chroma of said second paint is less than the chroma of said first paint, the hue of said second paint being substantially the same as the hue of said first paint.

17. The colorant of Claim 16, comprising:  
17      6.3% to 7.7% Color Index Pigment Yellow 42;  
17      2.16% to 2.64% Color Index Pigment Red 101; and  
17      3.6% to 4.4% Color Index Pigment Black 7.

30      18. The colorant of Claim 17, comprising:  
30      7.0% Color Index Pigment Yellow 42;

- 2.4% Color Index Pigment Red 101; and  
4.0% Color Index Pigment Black 7.
19. A method of producing a neutral paint colorant, comprising the steps of:  
blending Color Index Pigment Yellow 42, Color Index Pigment Red 101,  
and Color Index Pigment Black 7 together to form a pigment mixture; and  
blending said pigment mixture into a grinding liquid to form a paint  
colorant;  
wherein said paint colorant has a composition of 6.3%-7.7% Color Index  
Pigment Yellow 42, 2.16%-2.64% Color Index Pigment Red 101, and 3.6%-  
4.4% Color Index Pigment Black 7.
- 10 20. The method of Claim 19, wherein said paint colorant has a composition  
of 7.0% Color Index Pigment Yellow 42, 2.4% Color Index Pigment Red 101, and 4.0%  
Color Index Pigment Black 7.
- 15 21. A method of creating a paint, comprising the steps of:  
selecting a source paint comprising a mixture of paint colorants with a  
first paint base;  
blending a neutral paint colorant with a second paint base to form a  
neutral paint, said neutral colorant comprising 6.3% to 7.7% Color Index  
Pigment Yellow 42, 2.16% to 2.64% Color Index Pigment Red 101, and 3.6% to  
4.4% Color Index Pigment Black 7, said first and second paint bases being of  
the same type; and  
blending said neutral paint with said source paint to form an output paint;  
wherein the hue and value of said output paint are substantially equal to  
the hue and value of said source paint, the chroma of said output paint being less  
than the chroma of said source paint.
- 20 25 22. The method of Claim 21, wherein said neutral paint comprises 7.0%  
Color Index Pigment Yellow 42, 2.4% Color Index Pigment Red 101, and 4.0% Color  
Index Pigment Black 7.
23. The method of Claim 21, wherein said step of blending said neutral paint  
colorant with said second paint base comprises controlling the amount of said neutral

paint colorant which is blended with said second paint base so that said neutral paint has a value substantially equal to the value of said source paint.

24. A device for blending paint colorants with a paint base to create an architectural paint having a desired hue, value, and chroma, comprising a plurality of spouts adapted to eject a paint colorant, one of said spouts adapted to eject a neutral paint colorant.

25. The device of Claim 24, said neutral paint colorant comprising 6.3% to 7.7% Color Index Pigment Yellow 42, 2.16% to 2.64% Color Index Pigment Red 101, and 3.6% to 4.4% Color Index Pigment Black 7.